IFW

Sim & McBurney

Patent and Trade Mark Agents

330 University Avenue
6th floor
Toronto, Canada
M5G 1R7

Telephone (416) 595-1155
Fax (416) 595-1163

Please Quote
Our ref. 1038-1273 MIS/df

Your ref.

Writer's Ext. 239

E-mail: **mistewart@sim-mcburney.com**

October 26, 2004

VIA COURIER

Mail Stop DD
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sirs:

RE: U.S. Patent Application No. 10/699,683
Filing Date: November 4, 2003
Applicant: Robert C. Brunham et al
Title: TWO-STEP IMMUNIZATION PROCEDURE AGAINST CHLAMYDIA INFECTION

Please find enclosed an Information Disclosure Statement and copies of the references listed therein with respect to each of the references cited in the specification, in the International Search Report received on the corresponding International application and in prior U.S. application No. 09/453,289. The item marked with an asterisk will follow.

Respectfully submitted,

Michael I. Stewart
Registration No. 24,973

M.I. Stewart/df
Enclusures

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT	ATTY. DOCKET NO.: 1038-1273 MIS:df	SERIAL NO.: 10/699,683
	APPLICANT: Robert C. Brunham, et al.	
	FILING DATE November 4, 2003	GROUP 1645

U.S. PATENT DOCUMENTS

*INITIAL		DOCUMENT NO.	DATE	NAME	CLASS	SUBCL.	FILING DATE
		5,770,714	23/06/98	Agabian et al	536	23.1	

FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCL.	TRANSLATION	
		EP 0192033	27/08/86	EPO			YES	NO
		WO 98/10789	19/03/98	PCT				
		WO 98/02546	22/01/98	PCT				
		WO 98/48026	10/29/98	PCT				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	1	Grayston, J.T. and S.-P. Wang. 1975. New knowledge of chlamydiae and the diseases they cause. J. Infect. Dis., 132: 87-104.
	2	Grayston, J.T., S.-P. Wang, L.-J. Yeh, and C.-C. Kuo. 1985. Importance of reinfection in the pathogenesis of trachoma. Rev. Infect. Dis. 7:717-725.
	3	Taylor, H.R., et al., 1982. Animal Model of Trachema. II. The importance of repeated infection. Invest. Opthalmol. Visual. Sci. 23:507-515.
	4	Taylor, H.R., et al. 1981. An Animal Model for Cicatrizing Trachoma. Invest. Opthalmol. Sci. 21:422-433.
	5	Caldwell, H.D., et al. 1987. Tear and serum antibody response to *chlamydia trachomatis* antigens during acute chlamydial conjunctivitis in monkeys as determined by immunoblotting. Infect. Immun. 55:93-98.
	6	Wang, S.-P., et al., 1985. Immunotyping of *Chlamydia trachomatis* with monoclonal antibodies. J. Infect. Dis. 152:791-800.
	7	Nichols, R.L., et al., 1973. Immunity to chlamydial infections of the eye. VI. Homologous neutralization of trachoma infectivity for the owl monkey conjunctivae by eye secretions from humans with trachoma. J. Infect. Dis. 127:429-432.

EXAMINER:	DATE CONSIDERED:

***EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if in conformance and not considered. Include copy of this form with next communication with applicant.**

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT	ATTY. DOCKET NO. 1038-1273 MIS:df	SERIAL NO. 10/699,683
	APPLICANT: Robert C. Brunham, et al	
	FILING DATE November 4, 2003	GROUP 1645

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
	8	Orenstein, N.S., et al., 1973. Immunity to chlamydial infections of the eye V. Passive transfer of antitrachoma antibodies to owl monkeys. Infect. Immun. 7:600-603.
	9	Ramsey, KH, et al., (Mar. 1991) Resolution of Chlamydia Genital Infection with Antigen-Specific T-Lymphocyte Lines. Infect. and Immun. 59:925-931.
	10	Magee, DM, et al., (1995). Role of CD8 T Cells in Primary *Chlamydia* Infection. Infect. Immun. Feb. 1995. 63:516-521.
	11	Su, H. and Caldwell, HD., (1995) CD4+ T Cells Play a Significant Role in Adoptive Immunity to *Chlamydia trachomatis* Infection of the Mouse Genital Tract. Infect. Immun. Sept. 1995, 63: 3302-3308.
	12	Beatty, PR., and Stephens RS., (1994) CD8+ T Lymphocyte-Mediated Lysis of *Chlamydia*-Infected L Cells Using an Endogenous Antigen Pathway., Journal of Immun. 1994, 153:4588.
	13	Starnbach, MN., Bevan, MJ. and Lampe, MF. (1994), Protective Cytotoxic T. Lymphocytes are Induced During Murine Infection with *Chlamydia trachomatis*, Journal of Immun. 1994, 153:5183-5189.
	14	Starnbach, MN, Bevan, MJ. And Lampe, MF., (1995), Murine Cytotoxic T. Lymphocytes Induced Following *Chlamydia trachomatis* Intraperitonal or Genital Tract Infection Respond to Cells Infected with Multiple Serovars., Infect. & Immun. Sept. 1995, 63:3527-3530.
	15	Igietseme, JU, (1996), Molecular mechanism of T-cell control of *Chlamydia* in mice: role of nitric oxide *in vivo*. Immunology 1996, 88:1-5.
	16	Igietseme. JU, (1996), The Molecular mechanism of T-cell control of *Chlamydia* in mice; role of nitric oxide. Immunology 1996, 87:1-8.
	17	Ward, M.E. 1992. Chlamydial vaccines - future trends. J. Infection 25, Supp. 1:11-26.
	18	Caldwell, H.D., et al., (1981). Purification and partial characterization of the major outer membrane protein of *Chlamydia trachomatis*. Infect. Immun. 31:1161-1176.
	19	Bavoil, P., Ohlin, A. and Schachter, J., (1984) Role of Disulfide Bonding in Outer Membrane Structure and Permeability in *Chlamydia trachomatis*. Infect. Immun., 44: 479-485.
	20	Campos, M., et al., (1995) A *Chlamydia* Major Outer Membrane Protein Extract as a Trachoma Vaccine Candidate., Invest. Opthalmol. Vis. Sci. 36:1477-1491.
	21	Zhang Y.-X., et al., (1989). Protective monoclonal antibodies to *Chlamydia trachomatis* serovar- and serogroup-specific major outer membrane protein determinants. Infect. Immun. 57:636-638.
	22	Zhang, Y.-X., et al., 1987. Protective monoclonal antibodies recognise epitopes located on the major outer membrane protein of *Chlamydia trachomatis*. J. Immunol. 138:575-581.
EXAMINER:		DATE CONSIDERED:

***EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if in conformance and not considered. Include copy of this form with next communication with applicant.**

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT	ATTY. DOCKET NO. 1038-1273 MIS:df	SERIAL NO. 10/699,683
	APPLICANT: Robert C. Brunham, et al.	
	FILING DATE November 4, 2003	GROUP 1645

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
	23	Department of Health and Human Services, (1989) Nucleotide and amino acid sequences of the four variable domains of the major outer membrane proteins of *Chlamydia trachomatis*. Report Nos: PAT-APPL-7-324664. National Technical Information Services, Springfield, VA.
	24	Yuan, Y., et al. (1989) Nucleotide and deduced amino acid sequences for the four variable domains of the major outer membrane proteins of the 15 *Chlamydia trachomatis* serovars. Infect. Immun. 57:1040-1049.
	25	Su, H. and Caldwell, H.D. 1992. Immunogenicity of a chimeric peptide corresponding to T-helper and B-cell epitopes of the *Chlamydia trachomatis* major outer membrane protein. J. Exp. Med. 175:227-235.
	26	Su. H., N.G. Watkins. Y.-X. Zhang and H.D. Caldwell (1990). *Chlamydia trachomatis*-host cell interactions: role of the chlamydial major outer membrane protein as an adhesin. Infect. Immun. 58:1017-1025.
	27	Peeling, R., I.W. McClean and R.C. Brunham. (1984). *In vitro* neutralization of *Chlamydia trachomatis* with monoclonal antibody to an epitope on the major outer membrane protein. Infect. Immun. 46:484-488.
	28	Lucero, M.E. and C.-C. Kuo. (1985). Neutralization of *Chlamydia trachomatis* cell culture infection by serovar specific monoclonal antibodies. Infect. Immun. 50:595-597.
	29*	Baehr. W., et al. (1988) Mapping antigenic domains expressed by *Chlamydia trachomatis* major outer membrane protein genes. Proc. Natl. Acad. Sci. USA, 85:4000-4004.
	30	Stephens, R.S., et al. (1988) High-resolution mapping of serovar-specific and common antigenic determinants of the major outer membrane protein of *Chlamydia trachomatis*. J. Exp. Med. 167:817-831.
	31	Conlan, J.W., I.N. Clarke and M.E. Ward. (1988). Epitope mapping with solid-phase peptides: Identification of type-, subspecies-, species-, and genus-reactive antibody binding domains on the major outer membrane protein of *Chlamydia trachomatis*. Mol. Microbiol. 2:673-679.
	32	Conlan, J.W., et al., (1990). Isolation of recombinant fragments of the major outer membrane protein of *Chlamydia trachomatis*: their potential as subunit vaccines. J. Gen. Microbial. 136: 2013-2020
	33	Morrison, R.P., D.S. Manning, and H.D. Caldwell. (1992). Immunology of *Chlamydia trachomatis* infections. p. 57-84 In T.C. Quinn (ed) Sexually transmitted diseases. Raven Press Ltd., NY.
	34	Kersten, G.F.A. and Crommelin, D.J.A. (1995). Liposomes and ISCOMs as vaccine formulations. Biochimica et Biophysica Acta 1241 (1995) 117-138.
EXAMINER:		DATE CONSIDERED:

***EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if in conformance and not considered. Include copy of this form with next communication with applicant.**

* to follow

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT	ATTY. DOCKET NO. 1038-1273 MIS:df	SERIAL NO. 10/699,683
	APPLICANT: Robert C. Brunham, et al.	
	FILING DATE November 4, 2003	GROUP 1645

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
	35	Morein, B., et al., (1990) The iscom - a modern approach to vaccines seminars in Virology, Vol. 1, 1990: pp. 49-55.
	36	Mowat & Reid, 1992. Preparation of Immune Stimulating Complexes (ISCOMs) as Adjuvants. Current Protocols in Immunology 1992. Supplement 4: 2.11.1. to 2.11.12.
	37	M.A. Liu et al. Overview of DNA vaccines. 1995. Ann. N.Y. Acad. Sci. 772:15-20.
	38	W.M. McDonnell and F.K. Askari Molecular medicine. 1996. N.Engl. J. Med. 334:42-45.
	39	J.B. Ulmer et al. Heterologous protectin against infjuenza by injection of DNA encoding a viral protein. 1993. Science 259:1745-1749.
	40	M. Sedegah et al. Protein against malaria by immunization with plasmid DNA encoding circumsporozoite protein. 1994. Proc. Natl. Acad. Sci. U.S.A. 91:9866.
	41	A. Darji et al. Oral somatic transgene vaccination using attenuated S. typhimurium. 1997. Cell 91:765-775.
	42	D.R. Sizemore, Attenuatec bacteria as a DNA delivery vehicle for DNA-mediated immunization. 1997. Vaccine 15:804-807.
	43	D. O'Callaghan and A. Charbit. High efficiency transformation of salmonella typhimurium and salmonella typhi by electroporation. 1990. Mol. Gen. Genet. 223:156-158.
	44	R. Brunham et al. Chlamydia trachomatis from individuals in a sexually transmitted disease cor group exhibit frequent sequence variation in the major outer membrane protein (omp1) gene. 1994. J. Clin. Invest. 94:458-463.
	45	R.P. Morrison et al. Gene knockout mice extablish a primary protective role for major histocompatibility complex class II-Restricted responses in Chlamydia trachomatis genital tract infection. 1995. Infect. Immun. 63:4661-4668.
	46	K.Y. Leung et al., Intracellular replication is essential for the virulence of Salmonella typhimurium. 1991, PNAS 88(24):11470-11474.
	47	L.J. Hayes, et al. Chlamydia trachomatis major outer membrane protein epitopes expressed as fusions with LamB in an attenuated aro A strain of Salmonella typhimurium; their application as potential immunogens. (1991) pp. 1557-1564. XP-000877372
EXAMINER:		DATE CONSIDERED:

***EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if in conformance and not considered. Include copy of this form with next communication with applicant.**